

**TRIMETHYLSILANE**

Safety Data Sheet SIT8570.0

Date of issue: 27/10/2014

Revision date: 10/09/2015

Version: 1.1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form	: Substance
Physical state	: Gas
Trade name	: 3MS
Product code	: SIT8570.0
Formula	: C <sub>3</sub> H <sub>10</sub> Si
Synonyms	: 3MS; 2-METHYL-2-SILAPROPANE; TRIMETHYLSILYLHYDRIDE
Chemical family	: ORGANOHYDRIDOSILANE

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Use of the substance/mixture : Chemical intermediate

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet****GELEST, INC.**11 East Steel Road  
Morrisville, PA 19067**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)**GELEST INC.**Fritz-Klatte-Strasse 8  
65933 Frankfurt**Germany**

T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM

[info@gelestde.com](mailto:info@gelestde.com) - [www.gelestde.com](http://www.gelestde.com)**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable gases, Category 1	H220
Gases under pressure : Liquefied gas	H280
Full text of H statements : see section 16	

**Adverse physicochemical, human health and environmental effects**

No additional information available

**2.2. Label elements****Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) :

: Danger

Hazard statements (CLP) :

: H220 - Extremely flammable gas.  
H280 - Contains gas under pressure; may explode if heated.

Precautionary statements (CLP) :

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

# TRIMETHYLSILANE

## Safety Data Sheet

P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381 - In case of leakage, eliminate all ignition sources.  
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

### 2.3. Other hazards

Other hazards not contributing to the classification : Acts as a simple asphyxiant.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : TRIMETHYLSILANE  
CAS-No. : 993-07-7  
EC-No. : 213-603-0

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Trimethylsilane	(CAS-No.) 993-07-7 (EC-No.) 213-603-0	97 - 100	Flam. Gas 1, H220 Press. Gas (Liq.), H280

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.  
First-aid measures after skin contact : Wash with plenty of water/....  
First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.  
First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May be harmful if inhaled. Overexposure may cause: Cough. Headache. Nausea.  
Symptoms/effects after skin contact : May cause skin irritation.  
Symptoms/effects after eye contact : May cause eye irritation.  
Symptoms/effects after ingestion : May be harmful if swallowed.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.  
Unsuitable extinguishing media : None known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable gas. Irritating fumes and organic acid vapors may develop when material is exposed to water or open flame.  
Explosion hazard : May form flammable/explosive vapour-air mixture. Contains gas under pressure; may explode if heated.

### 5.3. Advice for firefighters

Firefighting instructions : Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire. Eliminate all ignition sources if safe to do so.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Fire fighters must wear positive pressure self-contained breathing apparatus. Avoid all eye and skin contact and do not breathe vapour and mist.

# TRIMETHYLSILANE

## Safety Data Sheet

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

#### 6.2. Environmental precautions

No additional information available

#### 6.3. Methods and material for containment and cleaning up

No additional information available

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Extremely flammable gas.

Precautions for safe handling : Handle only in sealed purged systems. Containers must be properly grounded before beginning transfer. Avoid all eye and skin contact and do not breathe vapour and mist. Provide good ventilation in process area to prevent formation of vapour. Use only non-sparking tools.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed. Protect from sunlight.

Incompatible materials : Oxidizing agent.

Storage area : Store in a well-ventilated place. Store away from heat.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

##### Appropriate engineering controls:

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels. Ensure adequate ventilation, especially in confined areas.

##### Personal protective equipment:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Avoid all unnecessary exposure.

##### Hand protection:

Neoprene or nitrile rubber gloves

##### Eye protection:

Chemical goggles. Contact lenses should not be worn

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Condensible.

# TRIMETHYLSILANE

## Safety Data Sheet

Molecular mass	: 74.2 g/mol
Colour	: No data available
Odour	: Distinctive. Mild.
Odour threshold	: No data available
Refractive index	: No additional information available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: > 1
Melting point	: No data available
Freezing point	: -135.9 °C
Boiling point	: 6.7 °C
Flash point	: < -20 °C
Critical temperature	: 158.85 °C
Auto-ignition temperature	: 320 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable gas.
Vapour pressure	: 1218 mm Hg @ 25°C
Critical pressure	: 31.48 atm
Relative vapour density at 20 °C	: 2.56
Relative density	: 0.638
Relative gas density	: 0.025 g/cm <sup>3</sup>
% Volatiles	: 100 %
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 1.3 - 44 vol % (lower; upper)

### 9.2. Other information

Gas group : Press. Gas (Liq.)

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable in sealed containers stored under a dry inert atmosphere.

### 10.3. Possibility of hazardous reactions

Can liberate hydrogen in the presence of precious metals (platinum or palladium) and Lewis acids (aluminum chloride etc.).

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Hydrogen. Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### Trimethylsilane (993-07-7)

LC50 inhalation rat	> 5000 ppm/1h
---------------------	---------------

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

# TRIMETHYLSILANE

## Safety Data Sheet

Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May be harmful if inhaled. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations	: May be incinerated. Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information

#### 14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR)	: 3161
UN-No. (IMDG)	: 3161
UN-No. (IATA)	: 3161
UN-No. (ADN)	: 3161
UN-No. (RID)	: 3161

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: LIQUEFIED GAS, FLAMMABLE, N.O.S.
Proper Shipping Name (IMDG)	: LIQUEFIED GAS, FLAMMABLE, N.O.S.
Proper Shipping Name (IATA)	: Liquefied gas, flammable, n.o.s.
Proper Shipping Name (ADN)	: LIQUEFIED GAS, FLAMMABLE, N.O.S.
Proper Shipping Name (RID)	: LIQUEFIED GAS, FLAMMABLE, N.O.S.
Transport document description (ADR)	: UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (TRIMETHYLSILANE), 2.1, (B/D)
Transport document description (IMDG)	: UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (TRIMETHYLSILANE), 2.1
Transport document description (IATA)	: UN 3161 Liquefied gas, flammable, n.o.s. (TRIMETHYLSILANE), 2.1
Transport document description (ADN)	: UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (TRIMETHYLSILANE), 2.1
Transport document description (RID)	: UN 3161 LIQUEFIED GAS, FLAMMABLE, N.O.S. (TRIMETHYLSILANE), 2.1

#### 14.3. Transport hazard class(es)

##### ADR

Transport hazard class(es) (ADR)	: 2.1
Danger labels (ADR)	: 2.1

# TRIMETHYLSILANE

## Safety Data Sheet



### IMDG

Transport hazard class(es) (IMDG) : 2.1

Danger labels (IMDG) : 2.1



### IATA

Transport hazard class(es) (IATA) : 2.1

Hazard labels (IATA) : 2.1



### ADN

Transport hazard class(es) (ADN) : 2.1

Danger labels (ADN) : 2.1



### RID

Transport hazard class(es) (RID) : 2.1

Danger labels (RID) : 2.1



#### 14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

#### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

#### 14.6. Special precautions for user

##### - Overland transport

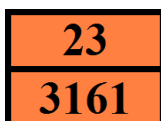
Classification code (ADR) : 2F

Special provisions (ADR) : 274, 662

# TRIMETHYLSILANE

## Safety Data Sheet

Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P200
Mixed packing provisions (ADR)	: MP9
Portable tank and bulk container instructions (ADR)	: (M), T50
Tank code (ADR)	: PxBN(M)
Tank special provisions (ADR)	: TA4, TT9
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV9, CV10, CV36
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 23
Orange plates	:



Tunnel restriction code (ADR)	: B/D
EAC code	: 2YE

### - Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P200
Tank instructions (IMDG)	: T50
EmS-No. (Fire)	: F-D
EmS-No. (Spillage)	: S-U
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW2

### - Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: 200
CAO max net quantity (IATA)	: 150kg
Special provisions (IATA)	: A1
ERG code (IATA)	: 10L

### - Inland waterway transport

Classification code (ADN)	: 2F
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

### - Rail transport

Special provisions (RID)	: 274, 662
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P200
Mixed packing provisions (RID)	: MP9
Portable tank and bulk container instructions (RID)	: T50(M)

# TRIMETHYLSILANE

## Safety Data Sheet

Tank codes for RID tanks (RID)	: PxBN(M)
Special provisions for RID tanks (RID)	: TU38, TE22, TA4, TT9, TM6
Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW9, CW10, CW36
Colis express (express parcels) (RID)	: CE3
Hazard identification number (RID)	: 23

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

3MS is not on the REACH Candidate List

3MS is not on the REACH Annex XIV List

TRIMETHYLSILANE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

TRIMETHYLSILANE is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

% Volatiles : 100 %

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 567)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F+ <Flam. Gas 1; Press. Gas (Liq.)>; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:



# TRIMETHYLSILANE

## Safety Data Sheet

Flam. Gas 1	Flammable gases, Category 1
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

SDS EU (REACH Annex II) - Custom

*The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.*

© 2019 Gelest Inc. Morrisville, PA 19067

